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ATTACHMENT
for Work Plan OU-5 Woman Creek Priority Drainage

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Any questions please call Carlotta Muheim at 966-3893.

TITLE: Executive Summary

Approved By:
Name (Date) 2/29/92

EXECUTIVE SUMMARY

This document presents the work plan for the Phase I RCRA Facility Investigation (RFI)/Remedial Investigation (RI) of the Woman Creek drainage (Operable Unit Number 5) at the Rocky Flats Plant, Jefferson County, Colorado. This work plan includes a field sampling plan (FSP) that presents the investigation planned to evaluate the presence or absence of contamination at Individual Hazardous Substance Sites (IHSSs) within the Woman Creek drainage. The FSP developed in this work plan is based on the requirements of the Interagency Agreement (IAG) amongst the Department of Energy (DOE), Environmental Protection Agency (EPA), and the State of Colorado Department of Health (CDH), and what additional work is needed to initially assess each IHSSs. Ten IHSSs are located in Operable Unit Number 5 (OU5). They are the Original Landfill (IHSS 115), the Ash Pits (IHSSs 133.1-133.4), the Incinerator (IHSS 133.5), the Concrete Wash Pad (IHSS 133.6), Detention Ponds C-1 and C-2 (IHSSs 142.10 and 142.11), and the Surface Disturbance (IHSS 209). Two additional surface disturbances have been identified and included in this work plan. These areas are located south of the Ash Pits and west of IHSS 209.

The schedule and the sequence of work for completing the OU5 investigation is specified in the IAG and is outlined below to provide background on the requirements for the OU5 RFI/RI. The IAG states that each OU may proceed through several phases of investigation dependent on the information gathered to characterize the OU (Section I.B.9, IAG Statement of Work). For OU5, the Original Landfill (IHSS 115) is the only IHSS that, *a priori*, will require a subsequent phase(s) of investigation. Due to its size and potential complexity, plans for detailed source characterization of IHSS 115 are best formulated using the results of the Phase I investigation that is designed to determine the IHSS boundaries and whether contaminant release is occurring. Other IHSSs may require a subsequent phase(s) of investigation pending the Phase I results in order to better characterize the nature and extent of contamination for the RCRA Corrective Measure Study (CMS)/CERCLA Feasibility Study (FS) and Baseline Risk Assessment (BRA). However, such subsequent phases are not envisioned at this time.

Following completion of the Phase I work plan, the IAG requires that the results of the Phase I RFI/RI for OU5 be documented within a draft Phase I RFI/RI report. This draft RFI/RI report will include a Preliminary Site Characterization and will also recommend work to be performed for the Phase II investigation, if required. The IAG specifies that this draft Phase I report be submitted to EPA and the State for review, and DOE will address the regulatory agency's comments and submit a Final Phase I RFI/RI report for EPA and/or State approval.

The IAG specifies that the priority and schedule for the Phase II RFI/RI investigations for OUs 3, 5, 6, 8, 12, 13, 14, 15, and 16 will be determined after evaluating the Final Phase I RFI/RI Reports for the operable units. If EPA and/or the State determine that no further investigatory work is required for OU5 after the Phase I investigation is complete, EPA and/or the State shall approve the Final Phase I RFI/RI Report as a Final RFI/RI Report. The field investigations for OU5 will be considered complete after approval of a Final RFI/RI Report.

Section 1.0 of this work plan presents introductory information and a general characterization of the region and plant site. In addition, the regional geology and hydrology at Rocky Flats are discussed. Section 2.0 presents descriptions of the site physical characteristics, histories and previous investigations, available information concerning the nature and extent of contamination, and conceptual models for the IHSSs. This initial characterization forms the basis for establishing data needs, data quality objectives (DQOs), and developing an FSP for each IHSS. Section 3.0 presents applicable or relevant and appropriate requirements (ARARs) developed for OU5. Section 4.0 establishes data needs and DQOs considering site characteristics and conceptual models of each IHSS in OU5. Section 5.0 outlines RFI/RI tasks to be performed. Section 6.0 presents the schedule for these tasks. A Field Sampling Plan, based on the requirements of the IAG, is presented in Section 7.0 to satisfy the data needs and DQOs identified in Section 4.0. The Baseline Risk Assessment Plan (BRAP) and Environmental Evaluation Plan (EEP) are presented in Sections 8.0 and 9.0, respectively. A Quality Assurance Addendum (QAA) and Standard Operating Procedure Addenda (SOPA) are presented in Sections 10.0 and 11.0, respectively. A list of references is presented in Section 12.0.

The initial step in the development of the OU5 RFI/RI work plan was a review of existing information. Available historical and background data for each IHSS were collected through a literature search and a review of the Rocky Flats Environmental Database System (RFEDS). Only a few limited investigations have been conducted at OU5 in the past. These investigations include a germanium gamma radiation survey at the Original Landfill (IHSS 115), sediment sampling in Woman Creek, ongoing surface water, groundwater and sediment sampling programs along Woman Creek and the South Interceptor Ditch (SID), and the Plant-wide Ambient Air Monitoring Program.

Data quality objectives have been developed for this Phase I investigation. DQOs are qualitative and quantitative statements that describe the quality and quantity of data required by the RFI/RI. The DQO process is divided into three stages. Through application of the DQO process, site-specific RFI/RI goals are established and data needs are identified for achieving these goals.

After assessing the existing information for OU5, the following objectives of the Phase I RFI/RI have been identified:

- Characterize the physical and hydrogeologic setting of the IHSSs
- Assess the presence or absence of contamination at the sites
- Characterize the nature and extent of contamination at the sites, if present
- Support the Phase I Baseline Risk Assessment and Environmental Evaluation
- Determine contaminant migration rate and transport characteristics

Within these broad objectives, site-specific data needs have been identified based on preliminary identification of contaminants potentially present at each IHSS and the data needs for the Phase I Baseline Risk Assessment and Environmental Evaluation. The FSP presented in this work plan is based on the data needs and the requirements of the IAG. The FSP for each IHSS requires a combination of screening activities, sampling of soils, sediment and surface water, and well installation and sampling. Site-specific FSPs are briefly summarized below.

IHSS 115 - Original Landfill. Screening activities at the Original Landfill will consist of a review of the gamma radiation survey recently completed and completion of a soil gas survey and magnetometer survey. Sampling will include subsurface sampling in borings, and sediment and surface water sampling adjacent to the unit. Wells will be installed and sampled downgradient of the unit and in selected soil borings if a plume is encountered. An additional activity at the unit will be a study of the pipes protruding from the landfill and sampling of effluent from the pipes, if present.

IHSS 133.1-6 - Ash Pits 1-4, Incinerator, and Concrete Wash Pad. Aerial photographs will be reviewed to identify the extent of disposal areas at the IHSS sites. A radiological survey and magnetometer survey will be the screening activities conducted at the IHSS 133 sites. Surface soil samples will be collected from the locations that have high radiation concentrations identified during the radiological survey. Subsurface samples will also be collected from borings in the Ash Pit areas. Three monitoring wells will be installed downgradient of the units and sampled.

IHSS 142 - Detention Ponds - C-Series. Surface water samples will be collected from several locations in each pond. Sediment samples will be collected in the ponds, as well as along the entire Woman Creek drainage within the Rocky Flats Plant. Sediment samples will also be collected in the SID. Two monitoring wells will be installed and sampled in the alluvium downgradient of each dam at Ponds C-1 and C-2.

IHSS 209 - Surface Disturbance Southeast of Building 881, the Surface Disturbance West of IHSS 209, and Surface Disturbances South of the Ash Pits. Visual inspections of the surface disturbance areas and reviews of historical use information pertaining to these sites will be completed prior to screening and sampling activities. A radiological survey will be completed at each area. Surface soil samples will be collected from the three excavations at IHSS 209, at the five disturbed areas at the surface disturbance west of IHSS 209, and from the north-south excavation at the surface disturbance south of the Ash Pits. A sediment sample and water sample (if water is present) will be collected from each of the former pond areas at IHSS 209. Surface and subsurface samples will be collected from borings in the parallel excavations and the east and west areas at the surface disturbance south of the Ash Pits. Surface samples will be collected at the surface disturbance west of IHSS 209.

Data collected during the Phase I Woman Creek drainage RFI/RI as well as data from other ongoing and planned investigations will be incorporated into the existing RFEDS database. These data will be used to better define site characteristics, source characteristics, and the nature and extent of contamination; to support the baseline risk assessment and environmental evaluation; and to evaluate potential remedial alternatives. An RFI/RI report will be prepared summarizing the data obtained during the Phase I program and containing the Phase I Baseline Risk Assessment and Environmental Evaluation.